

**CLAIMS:**

1. A method of isolating IgA present in a sample, the method comprising at least the steps of:

Bringing SET1 or a functional equivalent thereof in contact with the sample for a period sufficient to allow SET1 or functional equivalent thereof to bind to IgA to form a complex;  
Separating the complex; and,  
Releasing IgA from the complex.

2. A method of isolating C5 present in a sample, the method comprising at least the steps of:

Bringing SET1 or a functional equivalent thereof in contact with the sample for a period sufficient to allow SET1 or functional equivalent thereof to bind to C5 to form a complex;  
Separating the complex; and,  
Releasing C5 from the complex.

3. A method for isolating IgA from a sample, the method comprising at least the steps of:

Providing a matrix to which a SET1 protein or functional equivalent is bound;  
Providing a sample;  
Bringing said matrix and said sample into contact for a period sufficient to allow SET1 or functional equivalent thereof to bind to IgA present in the sample; and,  
Releasing IgA from the matrix.

4. A method as claimed in claim 3 wherein the method further comprises the step of collecting the IgA released.

5. A method as claimed in claims 3 or 4 wherein the matrix is in the form of a column over which the sample is passed.

6. A method as claimed in any one of claims 3 to 5 wherein the method further comprises the step of washing contaminants present in the sample from the matrix prior to release of IgA.

7. A method as claimed in any one of claims 3 to 6 wherein the matrix is Sepharose.

30 8. A method as claimed in any one of claims 3 to 7 wherein the sample is milk.

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9. A method as claimed in any one of claims 3 to 7 wherein the sample is colostrum.
10. A method as claimed in any one of claims 3 to 7 wherein the sample is serum.
11. A method as claimed in any one of claims 3 to 7 wherein the method further comprises the step of determining the quantity of IgA present in the sample.
- 5 12. A method as claimed in any one of claims 3 to 11 wherein IgA is released from the matrix using a 100mM glycine buffer at pH 3.0.
13. A method for isolating C5 from a sample, the method comprising at least the steps of:
  - Providing a matrix to which a SET1 protein or functional equivalent is bound;
  - 10 Providing a sample;
  - Bringing said matrix and said sample into contact for a period sufficient to allow SET1 or functional equivalent thereof to bind to C5 present in the sample; and,
  - Releasing C5 from the matrix.
14. A method as claimed in claim 13 wherein the method further comprises the step of collecting the C5 released.
- 15 15. A method as claimed in claim 13 or 14 wherein the matrix is in the form of a column over which the sample is passed.
16. A method as claimed in any one of claims 13 to 15 wherein the method further comprises the step of washing contaminants present in the sample from the matrix prior to release of C5.
- 20 17. A method as claimed in any one of claims 13 to 16 wherein the matrix is Sepharose.
18. A method as claimed in any one of claims 13 to 17 wherein the sample is milk.
19. A method as claimed in any one of claims 13 to 17 wherein the sample is  
25 colostrum.
20. A method as claimed in any one of claims 13 to 17 wherein the sample is serum.
21. A method as claimed in any one of claims 13 to 20 wherein the method further comprises the step of determining the quantity of C5 present in the sample.
22. A method as claimed in any one of claims 13 to 21 wherein C5 is released in low  
30 pH buffer such as 50mM acetate pH 3.5.
23. A method of detecting IgA in a sample, the method comprising at least the steps of:

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Contacting a sample with SET1 or functional equivalent thereof for a period sufficient to allow SET1 or functional equivalent thereof to bind to IgA; and,  
Detecting bound SET1 or functional equivalent thereof.

24. A method of detecting C5 in a sample, the method comprising at least the steps of:  
5      Contacting a sample with SET1 or functional equivalent thereof for a period sufficient to allow SET1 or functional equivalent thereof to bind to C5; and,  
         Detecting bound SET1 or functional equivalent thereof.

25. A method as claimed in claim 23 or 24 wherein the method further includes the step of determining or quantifying the level of bound SET1.

10     26. A method as claimed in claim 23 wherein the method is conducted for the purpose of diagnosing IgA abnormality in a subject.

27. A method as claimed in claim 24 wherein the method is conducted for the purpose of diagnosing C5 abnormality in a subject.

15     28. A method as claimed in any one of claims 23 to 26 wherein the subject is a mammal.

29. A method as claimed in claim 28 wherein the mammal is a human.

30. A method of removing IgA from a sample, the method comprising at least the steps of:  
20      Bringing SET1 or a functional equivalent thereof in contact with the sample for a period sufficient to allow SET1 or functional equivalent thereof to bind to IgA to form a complex; and,  
         Separating the complex from the sample.

31. A method of removing C5 from a sample, the method comprising at least the steps of:  
25      Bringing SET1 or a functional equivalent thereof in contact with the sample for a period sufficient to allow SET1 or functional equivalent thereof to bind to C5 to form a complex; and,  
         Separating the complex from the sample.

32. An isolated protein having the amino acid sequence SEQ ID NO: 6 or SEQ ID NO:  
30      7.

33. An isolated nucleic acid encoding a protein of SEQ ID NO:6 or SEQ ID NO:7.

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34. An isolated nucleic acid as claimed in claim 30 wherein the nucleic acid sequence is that represented by SEQ ID NO:12 or SEQ ID NO:13.
35. A kit for the detection, isolation, and/or removal of IgA and/or C5 in a sample, the kit comprising at least SET1 or a functional equivalent thereof.